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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,695	02/10/2004	Takanori Yamagishi	328-028	9178

27106 7590 05/24/2005

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EXAMINER

ZALUKAEVA, TATYANA

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 05/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/775,695

Applicant(s)

YAMAGISHI ET AL.

Examiner

Tatyana Zalukaeva

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

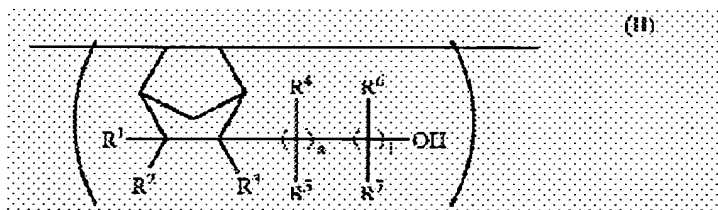
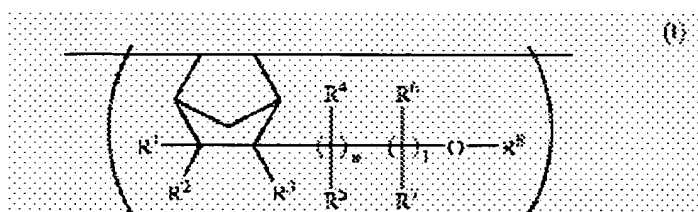
- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09/27/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 2-9 are cancelled. Claim 1 is amended to become a product-by-process claim vs. previously presented product claim.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1 and 10 are rejected under 35 U.S.C. 102(a, b, e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over any one of the following, each one individually: Toishi, Nozaki or Nishimura.

Toishi et al (US 20030175620).

Toishi discloses resist polymer comprising monomeric units of formula (I) and formula (II) presented in the abstract, polymer being insoluble or poorly soluble itself in an alkali aqueous solution but becoming soluble in an alkali aqueous solution by the action of an acid (abstract).



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The molecular weight of the polymer and molecular weight distribution measured by gel permeation chromatography, as discussed in [0150]. The ,molecular weight is shown $M_w=13,000$, which inherently fulfils the limitations of the instant claim 1 in terms of M_w .

Nozaki et al (US 2002/0058197).

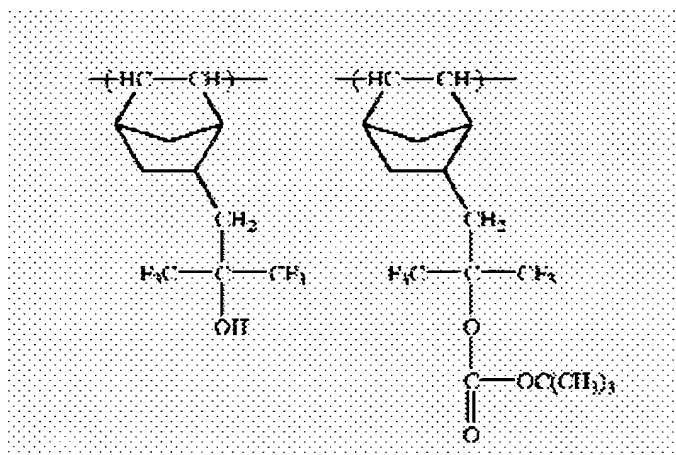
Nozaki discloses film-forming resist polymer, which has an alkali-soluble group and is soluble in an aqueous basic solution [0018]. The polymer having an acetal-protected vinyl ether structure may be a compound containing the acetal-protected vinyl ether structure in its molecule. In such a case, the negative resist composition of the present invention preferably comprises a combination of the compound containing an acetal-protected vinyl ether structure and a photo acid generator capable of generating an acid which can react with the alkali-soluble group after the acetal-protected vinyl ether structure produces the deacetalization reaction when decomposed as a result of absorption of imaging radiation, and the negative resist composition itself is soluble in an aqueous basic solution and the exposed portion becomes insoluble in an alkali after exposure[0021]. The polymer is preferably an acrylate polymer and its molecular weight is most preferably within the range of 3,000-50,000, thus it's preferably a low molecular weight polymer, as called in the instant claims. [0060]. The polymers of interest are depicted by the general formulas [0070], on pages 6 and 7, by [0078] on page 8. Of special interest the polymers obtained in Examples 1,2,3, (pages 14, 15) that provide for the monomer units readable on the instant claims, and have molecular weights M_w respectively 11,400, 10,800 and 9,800, wherein the polydispersity values given for each

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of the polymers fulfill the requirement of the instant claim 1 that high polymers practically do not present,

Nishimura et al (U.S. 2002/0009668).

Nishimura discloses radiation sensitive polymer, wherein the best polymer is depicted by Example 6



Molecular weight average of the polymer determined by gel permeation chromatography is 6,000, thus inherently and necessarily the limitation of molecular weight of the instant claim 1 is met by Nishimura.

The acid generator causes an acid-labile group in the resin (A) to dissociate by the action of an acid generated upon exposure. As a result, an exposed part of the resist becomes readily soluble in an alkaline developer, thereby forming a positive-tone resist pattern [0466].

As currently amended claims 1 and 10 are product-by-process claims. Because of the nature of product-by process claims, the Examiner cannot ordinarily focus on the precise difference between the claimed product and the disclosed product. It is then Applicants' burden to prove that an unobvious difference exists. See *In re Marosi*, 218 USPQ 289,

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292-293 (CAFC 1983). See also footnote 11 O.G. Notice 1162 59-61, wherein a 35 USC 102/103 rejection is authorized in the case of product-by-process claims because the exact identity of the claimed product or the prior art product cannot be determined by the Examiner. Furthermore there is no evidence, or no reason to believe that the process of polymerization as instantly claimed produces a different product, that of a polymerization of the applied references, since all the limitations of the products are either expressly or inherently present in the prior art, consult *In re Thorpe*, 227 USPQ 964 (CAFC 1985), wherein the product-by-process claims are rejected over a product, which although prepared in a different manner, appeared to be the same (prima facie) as the claimed product.

See also *In re Brown*, 173 USPQ 685 (CCPA 1972), the Court of Customs and Patent Appeals (CCPA) explicitly approved the 102/103 rejection of a product-by-process claim over a reference which showed a product which appeared to be identical or only slightly different from the claimed product.

In the instant case no Graham vs. John Deere analysis was made but rather the test set out in MPEP 706.03(e) and *In re Marosi* was applied while explaining why the claimed product does not patentably distinguish over the prior art under 35 USC 102/103.

Response to Arguments

4. Applicant's arguments with respect to claims 1 and 10 have been considered but are moot in view of the new ground(s) of rejection.

Applicants argument is almost entirely based on the alleged differences between the process of making resist polymer described in the prior art references versus the

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method of the instant claims. However, Applicants are advised that in the instant case, the product, not the process is claimed, and that the patentability of the product is defined by the product per se, not by the process of its making. This issue is discussed in the body of rejection above.

"The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion". In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983)."

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (571) 272-1115. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1305. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tatyana Zalukaeva
Primary Examiner
Art Unit 1713

May 19, 2005

